UNITED STATES PATENT AND TRADEMARK OFFICE

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10/743,375	12/23/2003	Kiyohisa Ichino	Q79111	8962

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EXAMINER
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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/743,375	ICHINO, KIYOHISA
	Examiner	Art Unit	
	Ben H. Liu	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>September 26, 2007</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-6,8 and 10-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6,8 and 10-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This is in response to an amendment/response filed on September 26, 2007.

2.   Claims 1, 2, 5, 6, 8, 10, and 12 have been amended.

3.   Claims 7 and 9 have been cancelled.

4.   Claims 14-17 have been added.

5.   Claims 1-6, 8, and 10-17 are currently pending.

Specification

6.   The lengthy specification has not been checked to the extent necessary to determine the

presence of all possible minor errors. Applicant's cooperation is requested in correcting any

errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
      or nonobviousness.

9.   Claims 1-2, 4, 8, and 10-17 rejected under 35 U.S.C. 103(a) as being unpatentable over

Murase (U.S. Patent 6,388,994) in view of Kelly et al. (U.S. Patent Application Publication

2003/0185212).

For claims 1, 8, 10, and 12, Murase discloses a transmission system, comprising a

sending device for converting higher-layer protocol data to continuous blocks of a fixed length,

inserting idle blocks between the continuous blocks to match the sending rate to the transmission

rate of the transmission line, and transmitting *(see column 4 lines 42-57, which recite a*

transmitting station that includes a dummy data generator for inserting continuous, fixed-length

ATM cells to the ATM switching system). The transmission system also comprises at least one

stage of relay devices for receiving continuous data blocks and idle blocks, discarding these idle

blocks to extract only the valid continuous blocks, and then inserting idle blocks between the

valid continuous blocks to match the sending rate to the transmission rate of the transmission line

on a transmission side and transmitting to a prescribed transfer destination *(see column 5 lines 1-*

4 and figure 3, which recite installing the traffic rate controller in any of the terminal stations

and relaying stations such as the ATM switching system 103 in between the terminal stations).

The transmission system further comprises a receiving device for receiving the continuous

blocks and the idle blocks from the relay device of the final stage, discarding these idle blocks to

extract only the valid blocks, and reconstructing said higher-layer protocol data from said valid

blocks *(see column 5 lines 5-13, which recite a receiving station that includes a dummy data*

detector to detect and discard dummy continuous, fix-length ATM cells).

Murase discloses all the subject matter of the claimed invention with the exception that

the traffic rate controller receives continuous blocks and idle blocks and further discards the idle

blocks and continuous blocks containing bit errors to extract only valid continuous blocks. Kelly

et al. from the same or similar fields of endeavor disclose TDM traffic over an ATM network

that detects and discards blocks containing errors *(see paragraph 62)*. Thus, it would have been

obvious to the person of ordinary skill in the art at the time of the invention to implement the

method for facilitating TDM traffic over an ATM network that detects and discards blocks

containing errors as taught by Kelly et al. with the transmission system including a traffic rate

controller as taught by Murase. The method for facilitating TDM traffic over an ATM network

that detects and discards blocks containing errors can be implemented with the transmission

system including a traffic rate controller by inserting a CRC error check functional block 33 as

taught by Kelly et al. in the traffic rate controller as taught by Murase. The motivation for using

the method for facilitating TDM traffic over an ATM network that detects and discards blocks

containing errors in the transmission system including a traffic rate controller is to ensure

conformance with service level agreement for the network traffic.

For claims 2, 4, 11, 13, and 15, Murase and Kelly et al. disclose all the subject matter of

the claimed invention with the exception of the following limitations: the sending device

generates 18-byte blocks by converting higher-layer protocol data to a length of 133 bits and

then adding supplementary information. The receiving device, after extracting only blocks that

are valid, removes supplementary information from received blocks to restore the length of 133

bits, and reconstructs said higher-layer protocol data in accordance with prescribed rules as

recited in claim 2, 11, 13, and 15. The transmission system wherein when the higher-layer

protocol data takes the form of frames, the sending device converts said frames to a length of 133

bits by adding null data to the tails of the frames to make the frame length an integer multiple of

16 octets, and adding to each unit of 16 octets five bits of type information indicating the

position of that unit within said higher-layer protocol data as recited in claim 4.

The examiner takes official notice that these limitations are well known in the art. Thus,

it would have been obvious to the person of ordinary skill in the art at the time of the invention to

implement these limitations with the transmission system as taught by Murase. For the relay

device, Murase teaches an ATM switching system connected between the sending and receiving

devices comprising of relay stations (see column 5 lines 1-4). These relay stations can include

the functions of discarding idle blocks and inserting new idle blocks to match the sending rate of

the transmission line. Murase teaches an ATM transmission system which uses 53 octets but can

be adapted to process 18 octets. The relay station as taught by Murase can be implemented by

utilizing the sending and receiving devices also taught by Murase as the relay stations of the

ATM switching network. The 18-byte format can be implemented by configuring the selector,

dummy data generator, and transmission data storage components as taught by Murase to

generate data blocks of 18 bytes. The motivation for using the relay stations as taught by Murase

with the functionality of discarding idle blocks and inserting new idle blocks to match the

sending rate of the transmission line is to allow transmission from the sending device to the

ATM network with one transmission rate and from the ATM network to the receiving device

using a different transmission rate. The motivation for the sending and receiving devices as

taught by Murase to use different block sizes is to allow compatibility with different data connections.

For claims 14, 16, and 17, Murase discloses all the subject matter of the claimed invention with the exception wherein the continuous blocks containing bit errors received by the relay device are discarded based on the condition of a capacity of a storage buffer. Kelly et al. from the same or similar fields of endeavor disclose TDM traffic over an ATM network that discards blocks that can include blocks containing errors based upon the capacity of the internal buffer *(see paragraph 62)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the method for facilitating TDM traffic over an ATM network that discards blocks containing errors based upon buffer capacity as taught by Kelly et al. with the transmission system including a traffic rate controller as taught by Murase. The method for facilitating TDM traffic over an ATM network that discards blocks containing errors based upon buffer capacity can be implemented with the transmission system including a traffic rate controller by inserting a CRC error check functional block 33 as taught by Kelly et al. in the traffic rate controller as taught by Murase. The motivation for using the method for facilitating TDM traffic over an ATM network that discards blocks containing errors based upon buffer capacity in the transmission system including a traffic rate controller is to ensure conformance with service level agreement for the network traffic.

10.   Claims 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murase (U.S. Patent 6,388,994) in view of Kelly et al. (U.S. Patent Application Publication 2003/0185212) as applied to claim 1 and in further view of Mueller (U.S. Patent 7,245,633).

For claims 3, 5, and 6, Murase and Kelly et al. disclose all the subject matter of the claimed invention with the exception wherein the transmission system uses the Ethernet protocol or 8B/10B code and the sending and receiving devices utilize SONET connections. Mueller from the same or similar fields of endeavor teaches a multiplexing method for combining Gigabit Ethernet signals for transmission through SONET connections by utilizing 8B/10B coding (see column 1 lines 65-67 and column 2 lines 1-11). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the multiplexing method as taught by Mueller with the transmission system as taught by Murase and Kelly et al. The method for combining Ethernet signals for transmission through SONET connections utilizing 8B/10B coding as taught by Murase and Kelly et al. can be easily implemented at layer 1 (see column 1 lines 28-38) through modifications to the sending and receiving devices. The motivation for using the multiplexing method as taught by Mueller is to allow for more efficient use of existing connections.

Response to Arguments

11.   Claims 1-10 were previously objected for the minor informalities. The applicant has overcome the objection by canceling claims 7 and 9 and amending claims 1-6, 8, and 10. In response, the objections have been withdrawn.

12.   Claim 1 was previous rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recited the limitation "said valid blocks" in lines 6-7. There is

insufficient antecedent basis for this limitation in the claim. Applicant has amended to the claim

to overcome the rejection. In response, the rejection has been withdrawn.

13.   Applicant's arguments with respect to claims 1-6, 8, and 10-13 have been considered but

are moot in view of the new ground(s) of rejection.

14.   Presently, claims 1-2, 4, 8, and 10-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Murase (U.S. Patent 6,388,994) in view of Kelly et al. (U.S. Patent

Application Publication 2003/0185212). Claims 3, 5 and 6 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Murase (U.S. Patent 6,388,994) in view of Kelly et al. (U.S. Patent

Application Publication 2003/0185212) as applied to claim 1 and in further view of Mueller

(U.S. Patent 7,245,633).

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. *(see form PTO-892)*.

16.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The examiner can normally be reached on 9:00AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FIRMIN BACKER
SUPERVISORY PATENT EXAMINER

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